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GENERAL GAS LIGHT COMPANY

Manufacturers of Humphrey Gas Unit Heaters

KALAMAZOO, MICH.

BRANCH OFFICES

NEW YORK, N. Y. PITTSBURGH, PA. CLEVELAND, OHIO SAN FRANCISCO, CAL.

Humphrey Gas Unit Heater

The Humphrey Gas Unit Heater is a heating plant and distributor combined. It embodies, in addition to the usual advantages of such equipment, some entirely new and unusual features. Because it is a gas-fired unit, burning either manufactured or natural gas, it can be installed anywhere. It is foolproof in construction, compact in size and operates at a very high efficiency. It can be operated by a direct control or it can be automatically controlled by a thermostatic switch.

Use

Because the Humphrey Gas Unit Heater delivers 1800 cu. ft. of heated air per minute, because *heat* can be had on a moment's notice and immediately dispensed with when no longer required, and because the room temperature can be thermostatically controlled within one or two degrees temperature range, it is unsurpassed as a heating unit.

The Humphrey Gas Unit Heater requires no boiler connection, therefore no licensed fireman is needed, and the dirt and inconvenience of handling solid fuel is obviated. This makes the Humphrey Unit Heaters especially desirable for heating factories, stores, warehouses, garages, dance halls, auditoriums, churches, etc. Because of its unique drying ability produced by the recirculation method of heating, the Humphrey Gas Unit Heater has proved itself to be a very efficient dryer. It works out very efficiently for drying leather, silk, paint, lumber, etc.

Humphrey Gas Unit Heater is ideal for intermittent heating. During spring and fall months, only occasional heat is required. The Humphrey Unit will lessen one's fuel bill greatly during this period. It stops all heating expense the moment the proper temperature is reached, yet giving instantly that additional heat so often required.

Advantages

The advantage of an even warmth at every point is obvious. It improves working conditions and increases the capability of workers. The economy of the Humphrey Gas Unit Heater is almost equally apparent:

(1) The initial cost is less than that of a direct radiation heating system.

(2) There is a very definite saving of fuel, because a building may be brought to a comfortable temperature so much more quickly, thus shortening the reheating period each day.

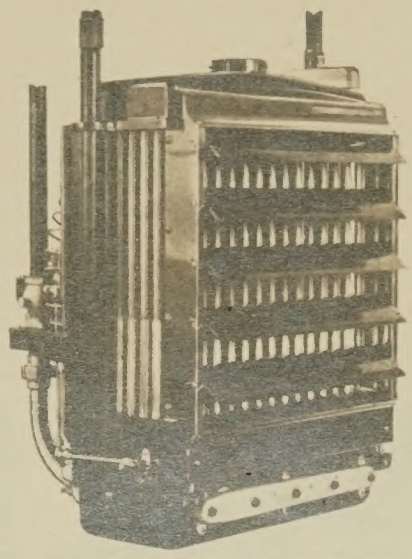
(3) Otherwise "dead" floor space, occupied by direct radiation heating equipment, is released for profitable use.

Equally important with comfort, efficiency and economy, is the adaptability of Humphrey Gas Unit Heaters to building changes. This elasticity, especially in this day of rapid expansion and almost overnight additions to plant and equipment, solves each new heating problem without the expensive necessity of enlarging a central heating plant.

No storage space required for fuel.
No boilers to clean.
No water needed for operation.
No replacement of grates, tubes, firewalls or parts.
No licensed fireman required.
No time lost getting up heat.
No coal to handle.
No dirt or ashes to remove.
Labor cost eliminated.
No worries over labor trouble.
Increased cleanliness.

Construction

Humphrey Gas Unit Heater is self-contained, consisting primarily of a burner box, combustion chamber, radiating tubes, vent housing and motor driven fan.



Front View Showing Air Directing Shutters and Compactness in Size
30 in. high, 26 in. wide, 26 in. deep

Every part of the Humphrey Gas Unit Heater is, in the rare event of replacement, independently removable. Thus it is practicable to operate the unit heater over long periods with virtually no attention.

Materials used throughout are of the finest quality and warranted to stand many years' usage.

Either natural or manufactured gas can be used in its operation.

Important: When ordering, specify whether heater is to be connected with direct or alternating current, advising cycle and voltage. All a-c. motors are single phase. Also give B.t.u. value of gas where unit is to be operated.

Operation

Gas combustion takes place in an inclosed cast iron chamber. Air is delivered under pressure to the burner box, thus insuring the high rate of combustion necessary to this Unit, and forcing the hot gases up through the radiation tubes to the vent housing.

Back of the radiation tubes is located a motor driven fan which forces air between the tubes and delivers 1800 cu. ft. of heated air per minute directly into the room to be heated.

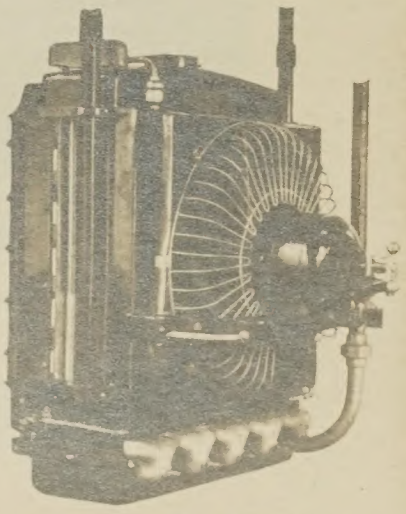
Humphrey Gas Unit Heater is automatic in operation. The main control valve is operated from a governor at end of motor shaft and remains in a closed position except when motor is running. This is a highly desirable feature as should the electric control to the motor be broken, either because it is intentionally turned off or on account of storms, the gas valve is simultaneously closed with the shutting down of the motor. Thus the possibility of the radiating tubes becoming overheated is eliminated. The moment the motor is started, the governor opens and turns on the gas which in turn is ignited by two pilots, one on each side of the burner. As these pilots control a thermostatic cut-out, if for any reason the pilots are extinguished, the motor is automatically prevented from operating. As a result, gas cannot be turned on until pilots are relighted.

Efficiency

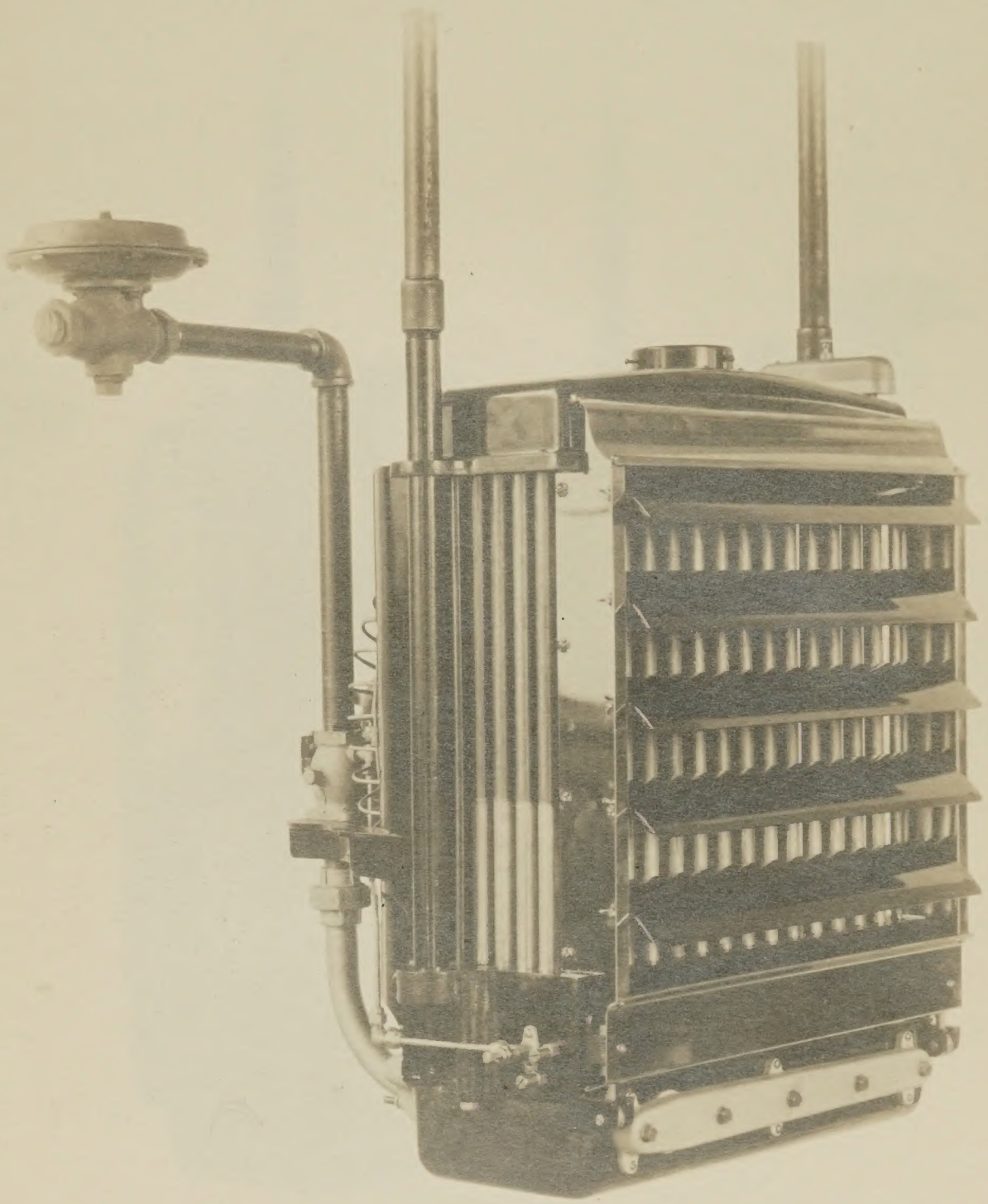
When operating at its full rating of 100,000 B.t.u., the Humphrey Gas Unit Heater is 83% efficient—this exceptionally high efficiency being obtained from the fact that air from the fan carries off the heat from the radiating tubes into the room at a high rate of speed, thus cooling the tubes and reducing the stack loss to a minimum. All gas is burned in a closed chamber, no flame is visible. Fire hazards are eliminated. The Humphrey Gas Unit Heater has been inspected and passed by the Underwriters' Laboratories, Inc.

Installation

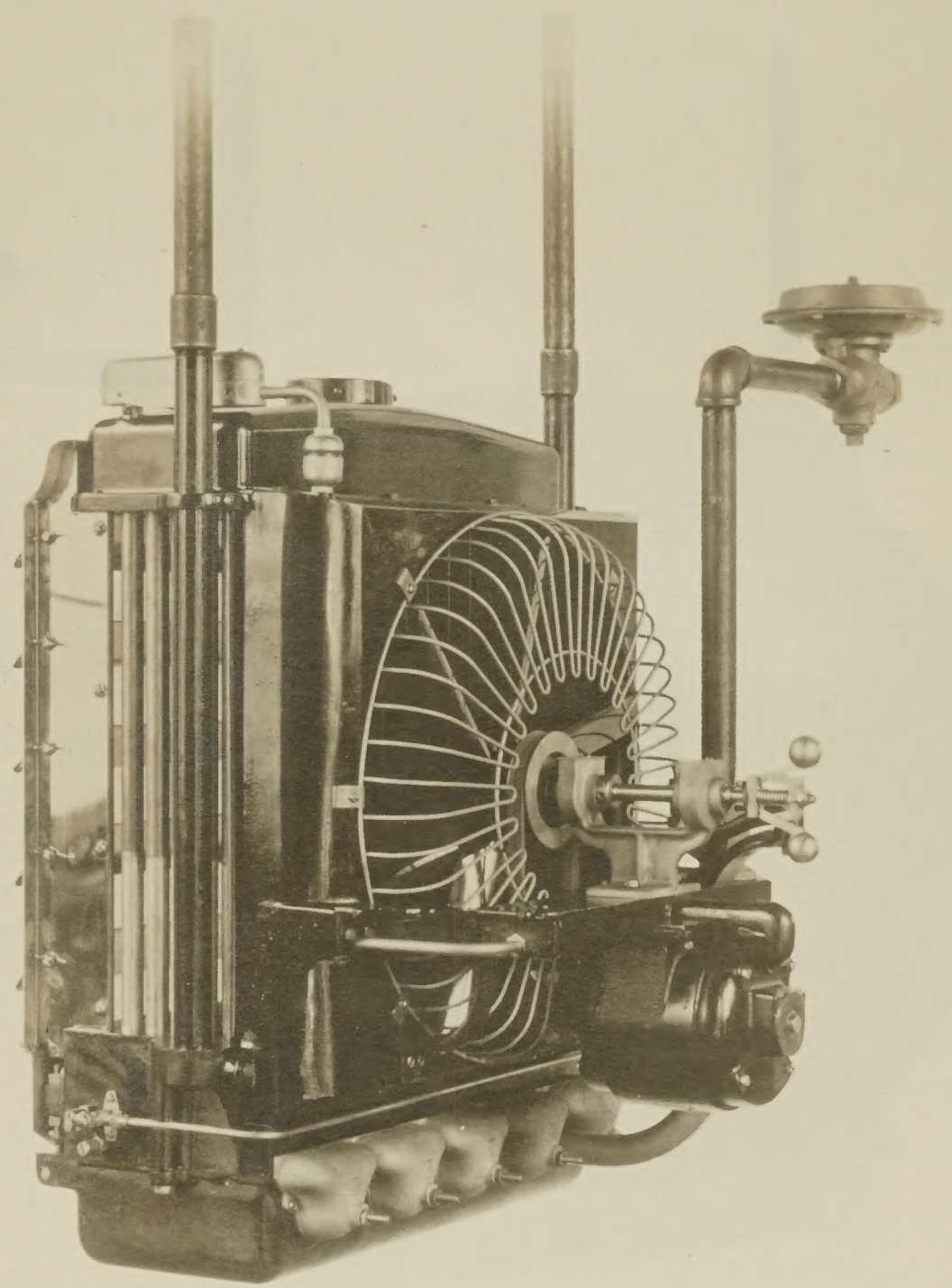
Because of light weight and method of suspension of the heater, it can be quickly and easily installed. All that is necessary is a gas supply line and electric motor connection. A line from the regular lighting circuit is sufficient for the motor which is rated at 1/6 hp.



Rear View Showing Circulating Fan Motor, Removable Burners and Connections



A view of the Humphrey Gas Unit Heater showing the radiating tubes and also the adjustable louvres for directing the warm air. This Unit is equipped with a standard high speed fan and delivers 1800 cu. ft. of heated air per minute. No boiler, no water, no coal and no firemen are necessary for its operation.



A rear view of the Humphrey Gas Unit Heater showing the special quiet slow speed fan that is operated by an underslung V belt drive motor. Note the governor. As the motor starts, the governor automatically opens the gas valve.

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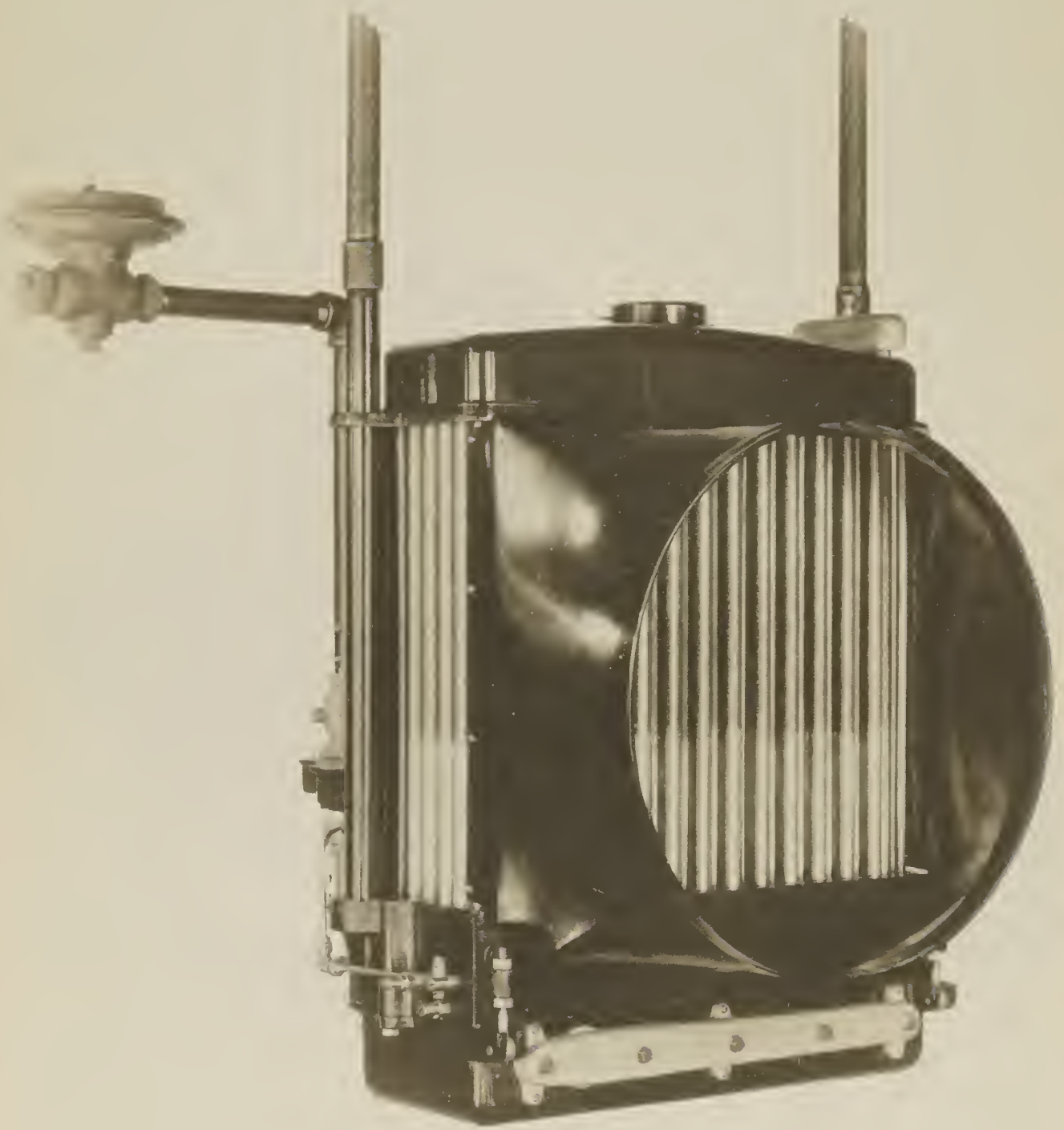
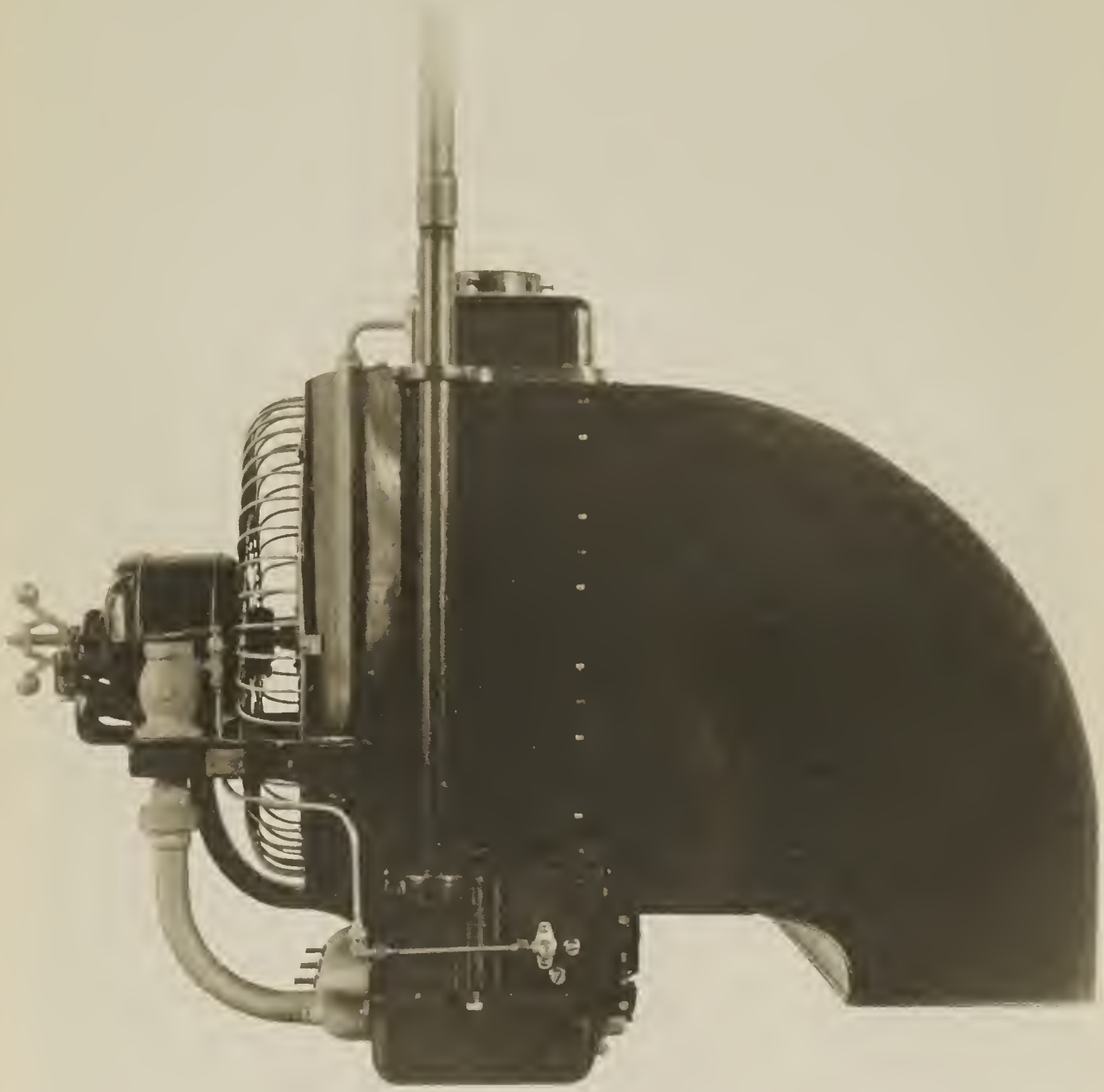


Front view of Humphrey Gas Unit Heater showing the aluminum conduit hood. This hood can be easily installed by removing the regular louvre front and fastening hood in place. This hood proves to be very convenient when warm air is to be directed a long distance, or several rooms are to be heated by a duct system.



A side view of the Humphrey Gas Unit Heater equipped with the 90 degrees high velocity nozzle. This nozzle can be easily installed on the Unit Heater by removing the regular louvre front. It is designed especially for heating rooms with high ceilings.

With this special equipment, a Unit Heater installed as high as 35 feet from the floor can easily force warm air down to the working area where needed.

Installation of 20 Humphrey Gas Unit Heaters heating a machine shop in Cleveland, Ohio.

An installation showing seven out of seventeen Humphrey Gas Unit Heaters used to heat the fairgrounds auditorium at Billings, Montana.

A view giving some idea of the cubical content of the fairgrounds auditorium at Billings, Montana. This building is heated with seventeen Unit Heaters.

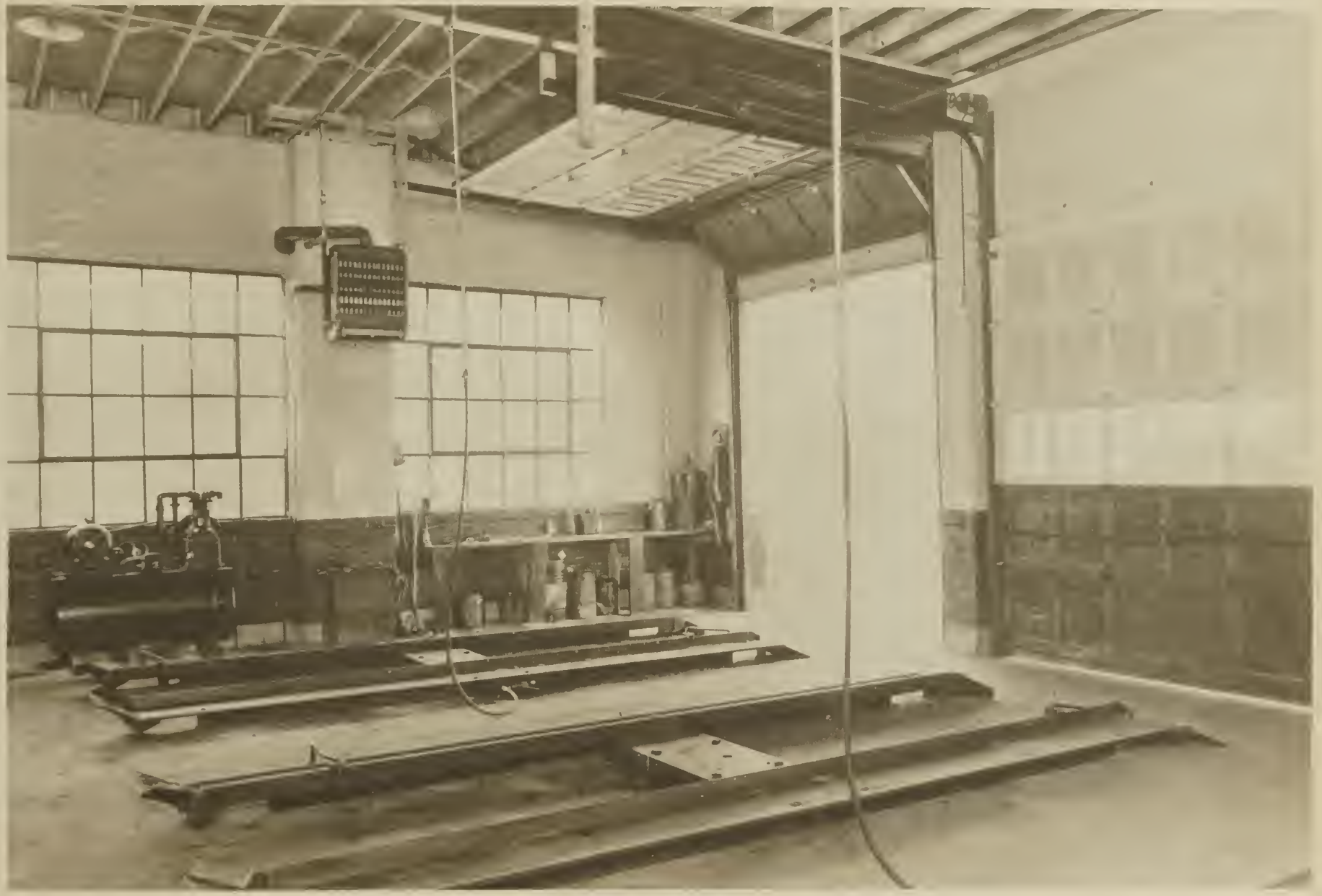
A view of a drafting room at Windsor, Ontario, Canada, which is heated with two Humphrey Gas Unit Heaters. Special louvres were installed on the Units, forcing air to ceiling to avoid blowing the loose papers about.

An exterior view of the Piggly Wiggly Store at Covington, Kentucky, which was heated with Humphrey Gas Unit Heater.

A view of the interior of the Piggly Wiggly Store at Covington, Kentucky. This store is heated with one Unit Heater Note that no valuable floor space or wall space is taken up with the Unit Heater method of heating

An installation of one Humphrey Gas Unit Heater in electro-plating plant. The Unit not only furnishes the necessary heat but keeps steamladen air in circulation until it passes off through ventilation, thus prevents condensation, so ruinous to expensive equipment.

Exterior view of The Refiners Oil Co. service station at Springfield, Ohio, which is heated with Humphrey Gas Unit Heaters.



View showing one of the Humphrey Gas Unit Heaters used to heat The Refiners Oil Co. service station at Springfield, Ohio. Where doors are opened frequently, a quick pickup is necessary — Humphrey Units make this possible.

Installation of one Humphrey Gas Unit Heater in the stockroom of the Public Service Gas and Electric Company at Englewood, New Jersey. This heater is used in addition to the steam boiler to bring the temperature up quickly to a degree so that men can work at their desks in comfort. The room becomes chilled in the morning from doors being opened for the loading of supplies on trucks.

Exterior view of the Western Pipe and Steel Company whose factory space is heated with Humphrey Gas Unit Heaters.

An installation of a Humphrey Gas Unit Heater in the shower room of the Western Pipe and Steel Company.

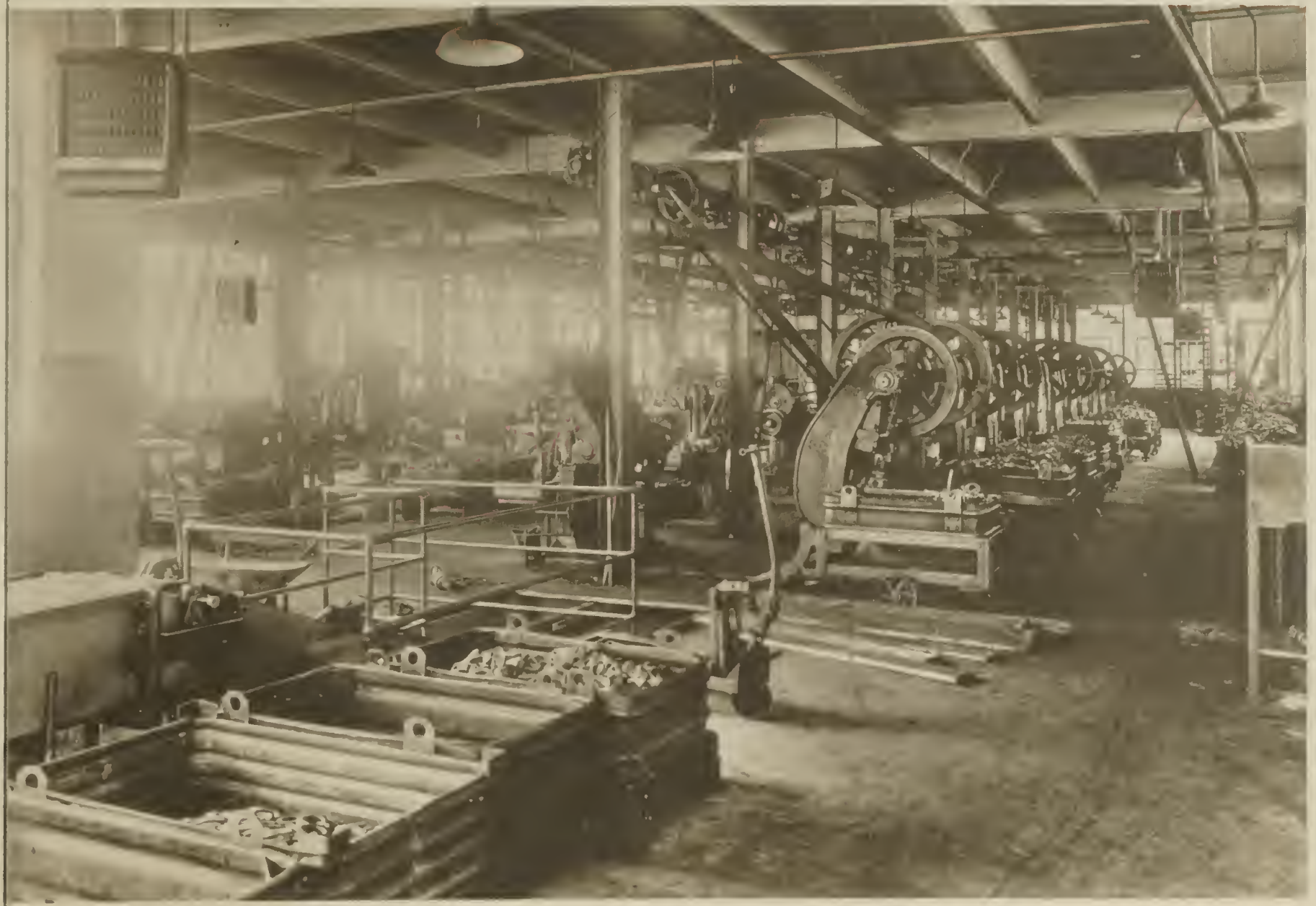
Exterior view of the Municipal Pier at St. Petersburg, Florida. This building is heated with Humphrey Gas Unit Heaters.

A view of one of the seventeen Humphrey Gas Unit Heaters which are used to heat the Municipal Pier at St. Petersburg, Florida.

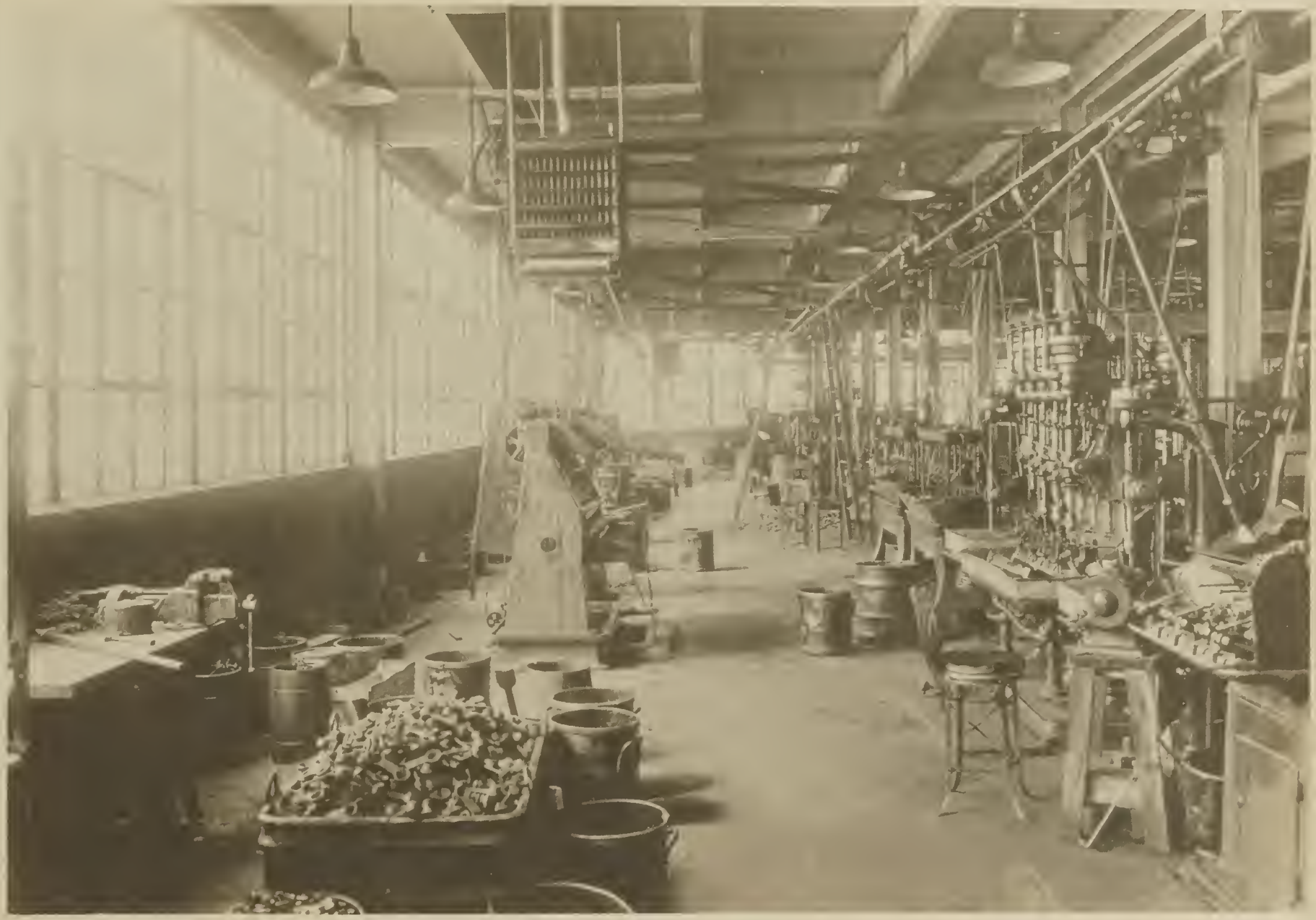
View of a Humphrey Unit Heater installed in the lunch room of the Municipal Pier, St. Petersburg, Florida.

Installation of the Humphrey Gas Unit Heater used to heat the Hupmobile Garage, Kalamazoo, Michigan.

The Buckeye Forging Company, Cleveland, Ohio. Building is 120 ft. long, 60 ft. wide, 15 ft. high, with 4/5 of the outside exposure glass. Five Humphrey Gas Unit Heaters maintained the average temperature of 62 degrees in zero weather.

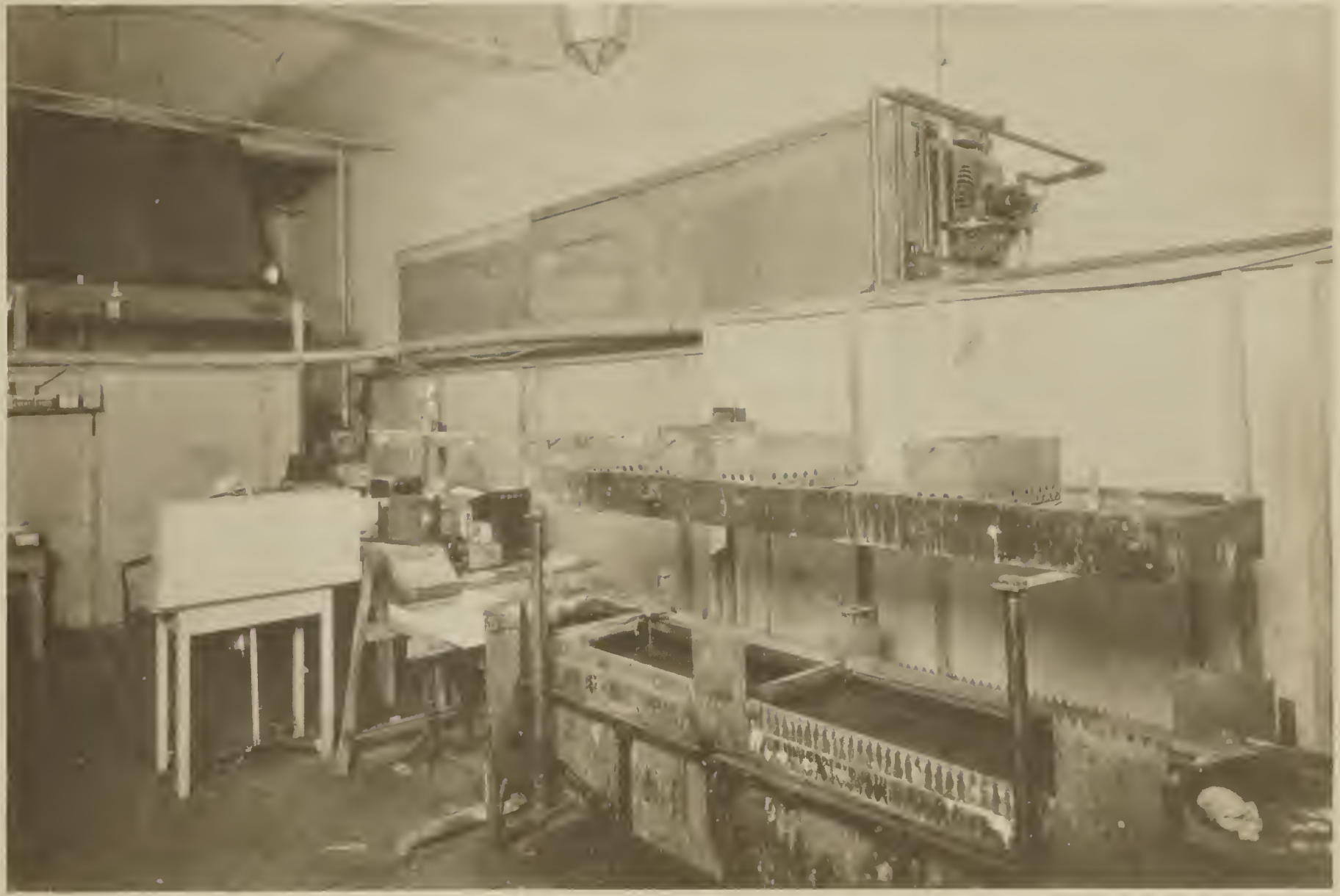


View showing installations of five Humphrey Gas Unit Heaters which heat the Buckeye Forging Company shop in Cleveland, Ohio.



View showing installation of Humphrey Gas Unit Heaters on one side of the Buckeye Forging Plant. Note glass exposure. All floor space is available for factory operation.

Installation of Humphrey Gas Unit Heater in Buckeye Forging Plant. This Unit is in front of the plant directly facing shipping doors, where finished material is delivered. Four men work at the table in front of the conveyors belt where all finished parts are inspected. In spite of the drafts from the open doors, the men are kept very comfortable.



Installation of one of the Unit Heaters for blowing air through a duct over a film drying cabinet. The hot air is being drawn from this duct and driven forward by six drying fans. Installation made by Consolidated Gas Co., New York.

A battery of six Unit Heaters in warehouse and receiving room 120 ft. long, 75 ft. wide, with 18 ft ceiling With receiving doors frequently open, a uniform temperature of 65 degrees was maintained in below zero weather. Heat can be directed to any desired level.

View showing two Unit Heaters in a scarf exchange, 26 W. 21st St., New York City. Besides heating the room, these heaters are used for drying hand-painted silk scarfs. Installation was made by Consolidated Gas Company.

Exterior of a private garage in Grand Rapids, Michigan, that is heated by Humphrey Gas Unit Heater.

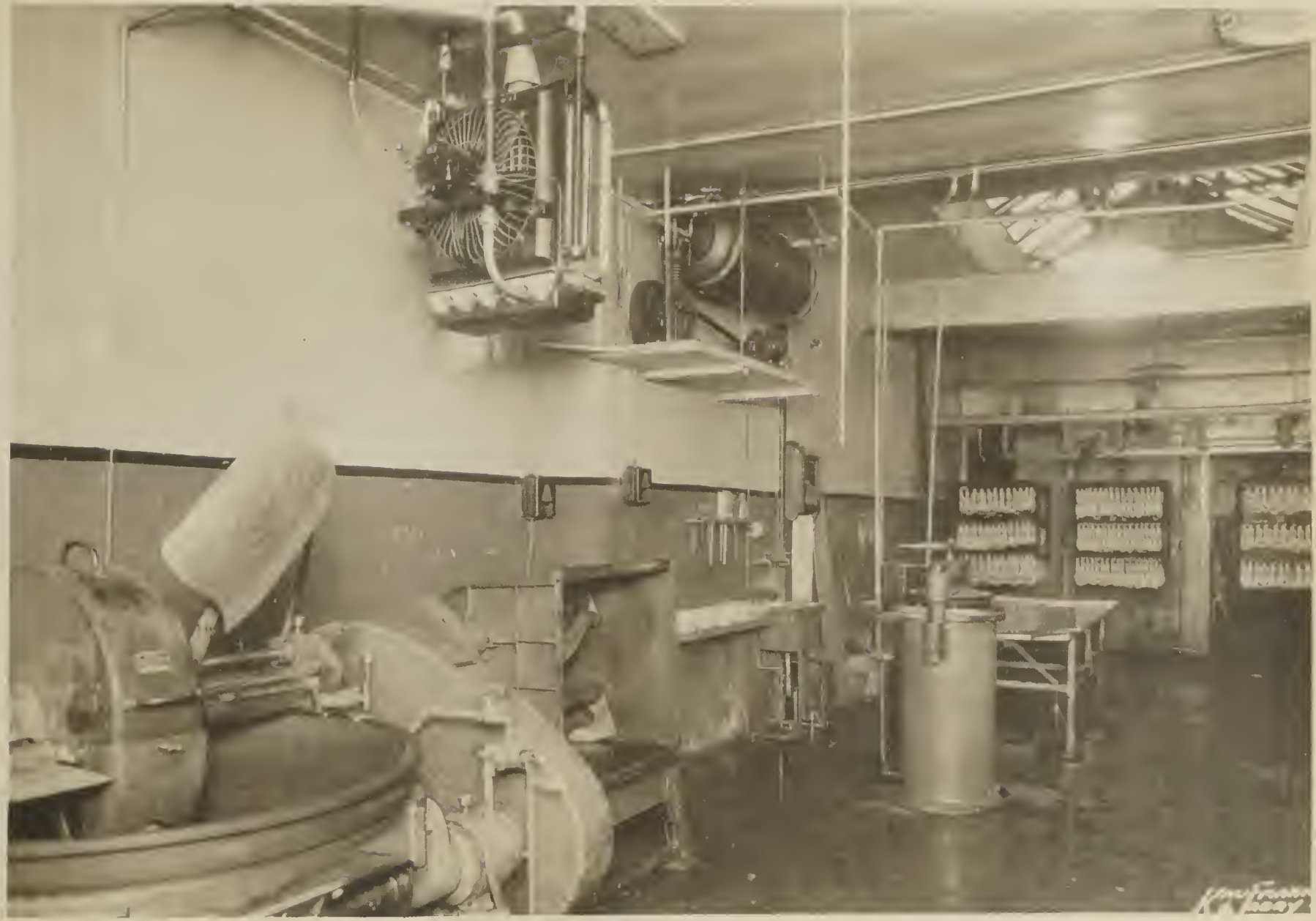
View showing the installation of one Humphrey Gas Unit Heater used to heat private garage in Grand Rapids, Michigan.

View showing one Humphrey Gas Unit Heater used for heating grocery store in Chicago, Illinois. Note that the Unit takes up no valuable floor space or wall space.

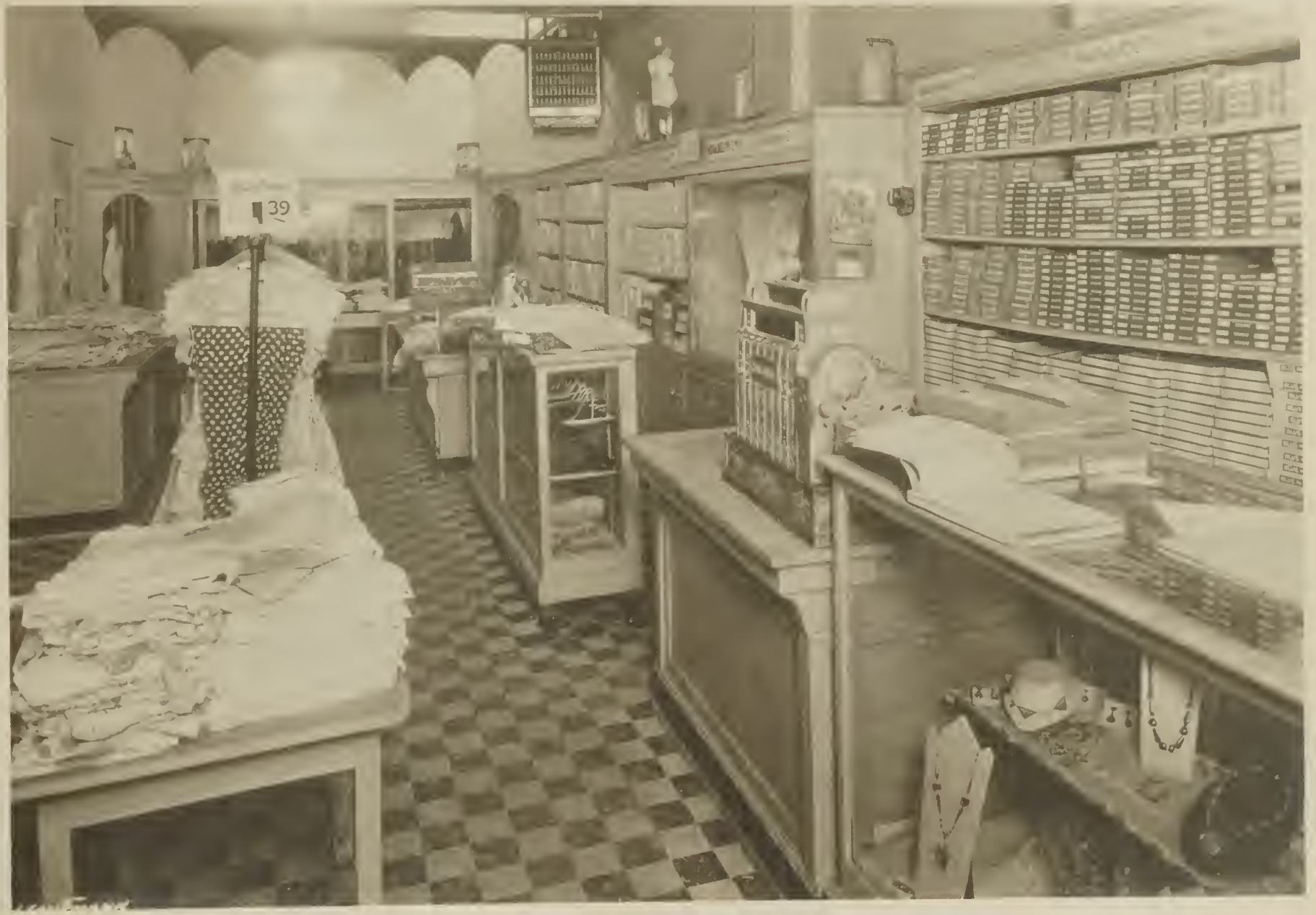
Installation of a Humphrey Gas Unit Heater in a shoe store in Chicago, Illinois. Note that the Unit is installed in the back room of the shoe store and heated air is forced into the salesroom through an open register.

Showing the closeup view of the Humphrey Gas Unit Heater installation in the back room of a shoe store in Chicago, Illinois. Besides heating the salesroom by forcing air through register, some of the heat is deflected into this stockroom, thus maintaining a very comfortable temperature in both rooms.

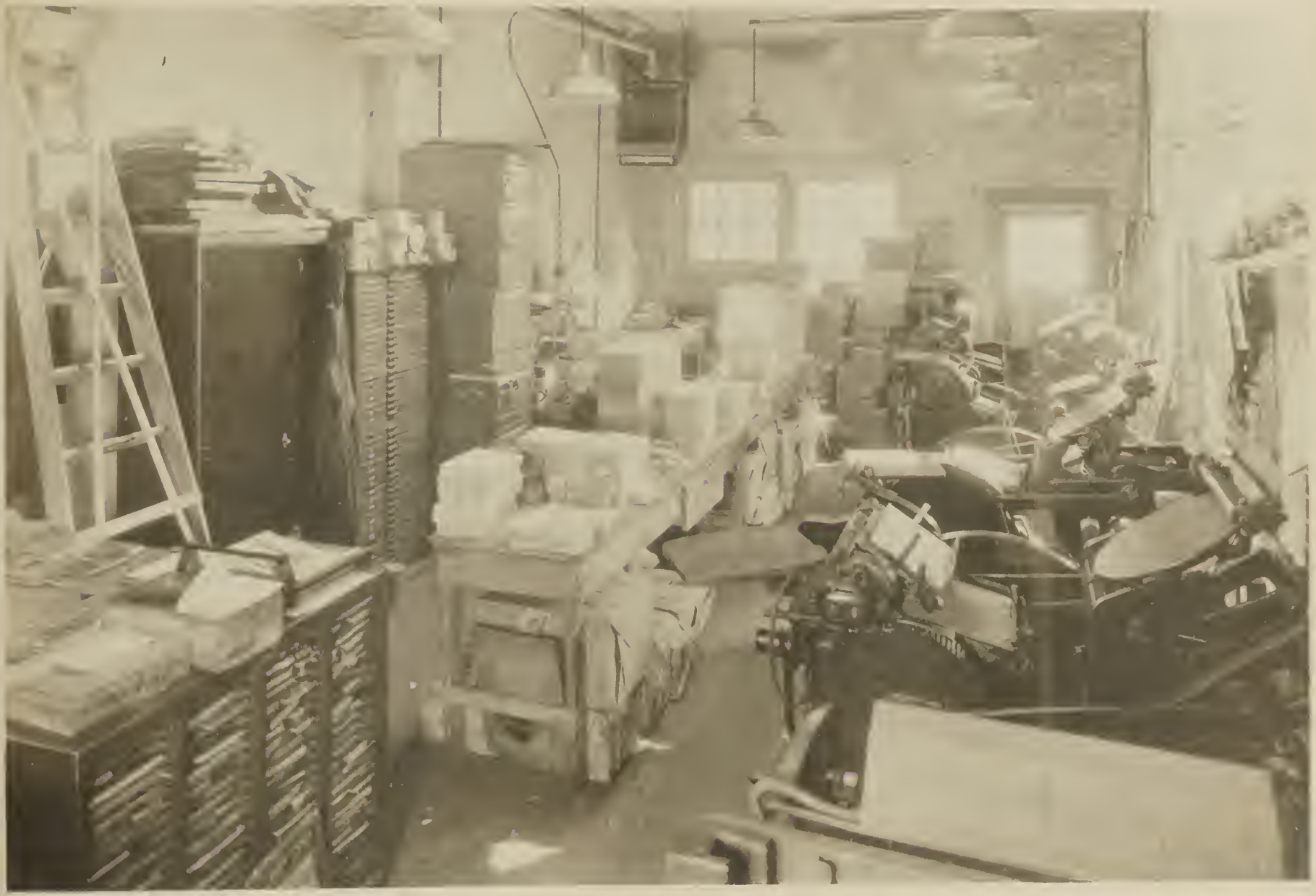
Installation of a Humphrey Gas Unit Heater used to heat a department store in Chicago, Illinois.



View of a Humphrey Gas Unit Heater installed in a sausage shop, Chicago, Illinois.



View of a Humphrey Gas Unit Heater installed in a drygoods store, Chicago, Illinois.



View of an installation of a Humphrey Gas Unit Heater installed in a printing shop, Chicago, Illinois. On installing the Unit, the old steam radiators were removed, making place for more printing machinery. The Unit Heater saves floor space.

View of a foundry that is heated with Humphrey Gas Unit Heaters. Besides heating the factory very comfortably In the winter months, the Units, with the gas shut off, are used for cooling the room during the summer months. It is found that when the Units are in operation the air is much clearer in the factory

Installation of a Humphrey Gas Unit Heater used as a drier for leather shoe counters in a shoe factory. Due to the re-circulation method of heating, a high temperature can be obtained which is ideal for drying.

Interior view of Airplane Hanger at Calgary, Alberta, Canada, which is heated with Humphrey Gas Unit Heaters. Forty degrees below zero is a common temperature during the winter months in Calgary. The initial stopover of the big Fokker plane was in this Humphrey Unit heated airplane hanger.

Showing two of the four Humphrey Gas Unit Heaters that heat a very modern grocery store in Calgary, Alberta, Canada. In spite of the common winter temperature of forty degrees below zero,.the Humphrey Units keep the store comfortably warm. Note that no valuable floor or wall space is taken up by the Units.